

## Study of Concurrent Enrollment Math Performance in a Subsequent Class

### Overview:

Utah SB 196 from the 2015 General Session challenged the State Board of Regents with increasing the number of students who complete their General Education Quantitative Literacy (QL) requirement senior year of high school. One thing needed to meet this goal: more Concurrent Enrollment Mathematics instructors. The statute identified public educators with higher level endorsement in Mathematics as eligible to teach CE Math. Utah System of Higher Education math departments developed robust professional development programs to engage new educators in the Math 1030, 1040, and 1050 curriculum, more CE QL Math options have been made available, and the number of students completing their QL requirement through CE has increased as a result of SB 196 initiatives.

To evaluate the strength of these efforts to involve public educators with Level 4 Mathematics endorsements, USHE analyzed data on the performance of students who took a CE math course(s) during 2016-17, who then took a subsequent math course during 2017-18 as a regular freshman. USHE collected data from the institutions on the education credentials of their math faculty so that the performance of students in subsequent math courses could be studied relative to the education credentials of the faculty member who taught the original CE math course(s).

### USHE Methodology:

USHE reviewed the combination of math course(s) taken by the student through CE during 2016-17 and the grades earned in the CE math course(s). Starting with students who earned a grade of C or higher in CE math course(s), we followed those who enrolled in math courses at USHE institutions as regular students during 2017-18:

Population	Headcount
# students who took CE math 2016-17	7,074
# students who took CE math 2016-17 and earned grade of C or higher	5,977
# students who took CE math 2016-17, earned grade of C or higher and took a math course as regular student at USHE 2017-18	2,031

The chart below shows the three categories that faculty were divided into based on their credentials. The majority of CE students who enrolled in a subsequent math course, 47%, received their CE math instruction from a faculty member who held a Ph.D. or Master's degree (excluding a M.Ed.). The Institutional Research departments, CE directors, and math department chairs were involved in reporting faculty credentials to USHE. However, the data request for math faculty credentials was a challenge for the institutions to fulfill as most institutions are not tracking adjunct or instructor-of-record faculty credentials in their campus-wide information systems.

Degree Category	Percent
Bachelor	14%
M.Ed.	21%
Ph.D. or Master	47%
Unknown	18%

### Findings:

78% of students who took a CE math course(s) during 2016-17 and subsequently enrolled in a math course during 2017-18 as a regular student earned a grade of C or higher in the subsequent math course. Based on the table below, there is not a significant difference in the passing rate of the subsequent math course when the student took CE math from a faculty member who held a bachelor's degree, a master's degree or a Ph.D.

Degree Category	Percent of Students who Passed Subsequent Math
Bachelor	77.2%
M.Ed.	73.1%
Ph.D. or Master	78.7%
Unknown	77.0%